

**THORIUM COMMODITIES  
(B16 ICP & B17 ICP & B64 ICP)**

**\*\*\*IMPORTANT NOTE\*\*\***

Transportation regulations have assigned the Exempt Consignment Activity for Th-232 as 1.0E+04 Bq and do not consider shipments of Th-232 in consignments with an activity of less than or equal to 1.0E+04 Bq as Class 7 (Radioactive). Consignments of Th-232 of GREATER than the Exempt Consignment Activity of 1.0E+04 Bq must be made as a Class 7 (Radioactive) shipment as indicated below.

**\*\*\*END NOTE\*\*\***

**Isotope and Activity:** Th-232, Various Activities (See Appendix E and Appendix F).

**Proper Shipping Name/Hazard Class/UN Number:**

Radioactive material, excepted package - instruments/7/UN2911.

**Chemical and/or Physical Form:** Th-232 oxide or ThF<sub>4</sub> coating, solid.

**Construction Form:** Normal form.

**Package Requirements:**

Packaging: Packaging meeting the General Design Requirements of 49 CFR 173.410 or the General Packing Requirements of IATA 10.5.3 and 10.3.10 as applicable.

Package Label: Not required.

Package Markings:

- The Proper Shipping Name, i. e, Radioactive material, excepted package - instruments.
- The UN number preceded by the letters "UN", i.e., UN 2911.
- The permissible gross weight, if this exceeds 110 pounds (50 kg).
- Full name and address of the shipper and the consignee.
- The full name and address of the shipper and the consignee; the UN number; and gross weight shall be marked on the outside of the package or overpack at least ½ inch (12 mm) high.

**Survey Requirements:**

Radiation Survey: Required prior to shipment.

- The radiation level at 10 cm (4 inches) from any point on the external surface of any unpackaged instrument or article shall not exceed 0.1 mSv/hr (10 mrem/hr).
- The radiation level at any point of the external surface of the package shall not exceed 0.005 mSv/hr (0.5 mrem/hr).

Contamination Wipe Survey: Performance of the package wipe survey and receipt of analysis results are required prior to shipment.

- The non-fixed surface contamination on the external surface of the package shall not exceed 22 dpm/cm<sup>2</sup> (alpha).

**Additional Requirements:** Declared shipments are permitted aboard passenger-carrying aircraft. However, the airlines have the first right of refusal regarding the acceptance of packages containing radioactive materials or other hazardous materials.

Vehicle Placard: Not required.

**Additional Comments:**

- There is no activity limit to the number of thorium commodities that you may ship per package.
- You may use a larger box or additional shielding to reduce the radiation level to less than 0.005 mSv/hr (0.5 mrem/hr).
- For the RAM activity in each end article containing thorium, refer to Appendix E, Appendix F or consult TB 43-0116, Identification of Radioactive Items in the Army.
- You may mail (USPS) as many thorium commodities per package as necessary. All other 49 CFR conditions applicable to excepted packages for radioactive instruments, as indicated above, apply.